CLAIMS

I claim:

1. A real drum trigger monitor and amplified tone module, comprising:

a hollow drum shell having at least one drumhead closing one end of the drum shell;

an electronic trigger sensor mounted within the drum shell, the trigger sensor having an output;

a speaker subsystem mounted within the drum shell, the speaker subsystem having an input;

a drum shell connector disposed on the drum shell, the drum shell connector having an input portion and an output portion, the output portion being electrically connected to the output of the trigger sensor and the input portion of the connector being electrically connected to the input of the speaker subsystem.

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2. The real drum trigger monitor and amplified tone module according to claim 1, wherein said speaker subsystem further comprises:

a low frequency speaker;

a high midrange speaker; and

means for controlling an operating frequency range of the speakers.

3. The real drum trigger monitor and amplified tone module according to claim 1, wherein said speaker subsystem further comprises:

an upper speaker mounting plate disposed within said drum shell;

a spacer ring disposed on top of the upper speaker mounting plate, beneath said drumhead; and

a lower speaker mounting plate disposed within said drum shell, the lower speaker mounting plate having at least one vent hole disposed therein.

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4. The real drum trigger monitor and amplified tone module according to claim 1, further comprising a sound module having:

a housing removably attached to said drum shell, the housing having a front and a rear;

a housing connector disposed on the rear of the housing, the housing connector being electrically connected to said drum shell connector when the sound module is mounted to said drum shell;

an analog-to-digital converter having an input and an output, the input being electrically connected to the housing connector, whereby the output of said trigger sensor is electrically connected to the input of the analog-to-digital converter when the sound module is mounted to said drum shell;

a tone processor having input and output signals, the input of the tone processor being connected to the output of the analog-to-digital converter;

a digital-to-analog converter having an input and an output, the input of the digital-to-analog converter being connected to the output of the tone processor; and

an amplifier having an input and an output, the amplifier input being connected to the output of the digital-to-analog converter, the output of the amplifier being electrically

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connected to the output of the housing connector, whereby the output of the amplifier is electrically connected to the input of said speaker subsystem when the sound module is mounted to said drum shell.

5. The real drum trigger monitor and amplified tone module according to claim 4, wherein said sound module further comprises:

a control panel; and

power means for supplying operative electric power to the real drum trigger monitor and amplified tone module.

6. The real drum trigger monitor and amplified tone module according to claim 5, wherein said control panel includes:

an LCD display;

a MIDI patch control;

means for adjusting sensitivity of the output of said trigger sensor; and

means for adjusting output level of said digital-to-analog converter.

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7. The real drum trigger monitor and amplified tone module according to claim 4, wherein said sound module includes:

an interface connecting the input from said analog-to-digital converter to an external device; and

an interface connecting an external trigger signal to the input of said analog-to-digital converter.

8. The real drum trigger monitor and amplified tone module according to claim 4, wherein said tone processor includes a microprocessor, memory, program instruction code stored on said memory, and a plurality of tones digital stored on said memory.

9. The real drum trigger monitor and amplified tone module according to claim 4, wherein said tone processor further comprises a MIDI compatible interface to an external MIDI device.

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10. The real drum trigger monitor and amplified tone module according to claim 4, wherein said sound module further comprises a tone card reader electrically connected to said tone processor, whereby additional tones may be read into said memory.

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11. A real drum trigger monitor and amplified tone module adapted to receive an electronic percussion instrument having a trigger sensor output, the real drum trigger monitor and amplified tone module comprising:

a hollow drum shell;

a speaker subsystem mounted within the drum shell, the speaker subsystem having an input;

a drum shell connector disposed on the drum shell, the drum shell connector being electrically connected to the input of the speaker subsystem; and

a sound module removably attached to the drum shell, the sound module including a housing having:

a front and a rear;

a housing connector disposed on the rear of the housing, the housing connector engaging said drum shell connector when the sound module is mounted to said drum shell;

a trigger input connector adapted to receive the trigger sensor output of an electronic percussion instrument;

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an analog-to-digital converter having an input and an output, the input being electrically connected to the trigger input connector;

a tone processor having input and output signals, the input of the tone processor being connected to the output of the analog-to-digital converter;

a digital-to-analog converter having an input and an output, the input of the digital-to-analog converter being connected to the output of the tone processor; and

an amplifier having an input and an output, the amplifier input being connected to the output of the digital-to-analog converter, the output of the amplifier being electrically connected to the output of the housing connector, whereby the output of the amplifier is electrically connected to the input of said speaker subsystem when the sound module is mounted to said drum shell.

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12. The real drum trigger monitor and amplified tone module according to claim 11, wherein said speaker subsystem further comprises:

a low frequency speaker;

a high midrange speaker; and

means for controlling an operating frequency range of the speakers.

13. The real drum trigger monitor and amplified tone module according to claim 11, wherein said sound module further comprises a tone card reader electrically connected to said tone processor, whereby additional tones may be read into said memory.

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14. The real drum trigger monitor and amplified tone module according to claim 11, wherein said tone processor includes a microprocessor, memory, program instruction code stored on said memory, a plurality of tones digital stored on said memory. The real drum trigger monitor and amplified tone module according to claim 11, wherein said tone processor comprises a MIDI compatible interface to an external MIDI device.

15. The real drum trigger monitor and amplified tone module according to claim 10, wherein said sound module further comprises a control panel and power means for supplying operative electric power to the real drum trigger monitor and amplified tone module.

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16. The real drum trigger monitor and amplified tone module according to claim 15, wherein said control panel further includes:

an LCD display;

a MIDI patch control;

means for adjusting sensitivity of the output of said trigger sensor; and

means for adjusting voltage output level of said digital-to-analog converter.

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17. A real drum trigger monitor kit for converting a drum and at least one speaker into a real drum trigger monitor, the drum having a hollow drum shell and at least one drumhead closing one end of the drum shell, the real drum trigger monitor kit comprising:

an upper speaker mounting plate adapted for mounting within the drum and adapted for having a first speaker secured thereto;

a spacer ring inserted between the upper speaker mounting plate and the drumhead, and

a lower speaker mounting plate adapted for mounting within the drum and adapted for having a second speaker mounted thereto, the lower speaker mounting plate having at least one vent hole disposed therein.

18. The real drum trigger monitor kit according to claim 17, wherein said upper speaker mounting plate and said spacer ring form a single unitary structure.

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